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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/567,622

Applicant(s)

FUKUDA, KUNIO

Examiner

QUANG PHAM

Art Unit

2612

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Response To Amendment

Response to Applicant's Arguments/Remarks

1. Applicant's arguments, see Remarks, filed 03/24/2010, with respect to the rejection(s) of claims 1-3 under 35 USC 103(a) (over **Takei** in view of **Sorrells**), claim 4 under 35 USC 103(a) (over **Takei** in view of **Sorrells, Maeda** and further in view of **Hohberger**), and claim 5 under 35 USC 103(a) (over **Takei** in view of **Sorrells** and further in view of **Maeda**), has been fully considered and are not persuasive. On the Applicant's remarks page 5, the Applicant indicated the cancellation of claims 6-10. Furthermore, amended new limitations necessitated new grounds of rejection as detailed in the rejection below.

On page 6 of the Applicant's remarks, the Applicant argued that:

First, the combination of **Takei** and **Sorrells** that the Examiner relied on does not teach the claimed limitations of the data supply source apparatus and the data provided destination apparatus as amended **claim 1**. Second, the combination would have not been obvious to one of the ordinary skill in the art to combine **Takei** and **Sorrells** in the manner apparently proposed by the Examiner. The Examiner disagrees with Applicant's interpretation of **Takei** and/or **Sorrells** because:

Takei discloses a system comprising a camera unit and a recording unit, wherein the camera unit (the data supply source apparatus) sends the still or moving image data (column 13 lines 61 – column 14 lines 2) to the recoding unit (the data provided destination apparatus) using the radio frequency and wireless communication (column 6 lines 7-36). The recoding unit receives the image data from the camera unit and records the data into the image memory (column 1 lines 14-19, column 8 lines 30-43, column 10 lines 40-67, and column 11 lines 12).

Sorrells discloses radio frequency identification tag with sensor input (the data supply source apparatus), wherein the tag sends the sensor data to the reader/interrogator (the data provided destination apparatus) using the backscattering scheme (column 1 line 64 – column 2 line 17, column 4 lines 9-27, column 6 lines 52-55, and FIG.7A-B).

Therefore, one of the ordinary skill in the art would modify **Takei** using the teaching system/method of **Sorrells** to obtain the claimed invention in the combination of **Takei** and **Sorrells** by integrating the sensor of **Sorrells** such as camera unit into the RFID tag to transmit the image data from the camera unit to the reader/interrogator using the backscattering scheme, and the reader/interrogator receives the responsive image data from the RFID tag to store the responsive signal in the memory of the reader/interrogator for the purpose of using the benefit of low power communication of RFID technology.

Therefore, due to the claimed amendments, upon further consideration, a new ground of rejections is made in view of following reference/combinations.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-3 and 11-12 are rejected under 35 USC 103(a) as being unpatentable over Takei et al. (Takei – US 6,545,709 B2) in view of Sorrells et al. (Sorrells – US 6,720,866 B1).**

(1). As to **claim 1**, **Takei** discloses wireless receiving apparatus and method therefor. Further, **Takei** discloses *a wireless communication system for data transmission by radio waves between a data supply source apparatus and a data provided destination apparatus, in which:*
the data supply source apparatus (FIG. 3 the image pickup device 300 or FIG. 4 the image pickup device 400) *communicate with the data provided destination apparatus* (FIG. 10 the recording device 903) to transfer the **photographing data** (column 1 lines 14-19).

Except for the claimed limitations of *the wireless communication system wherein:*
the data supply apparatus is operable photograph a moving image or still image and to perform an RFID (Radio Frequency Identification) tag function that transmits image data obtained from a photographing operation by a back scattering scheme by absorbing or reflecting external radio waves provided by the data provided destination apparatus in accordance with a bit string of the data through an on/off control of an antenna switch to make an antenna in a terminated state or an open state; and
the data provided destination apparatus is operable to perform a reader function that transmits the radio waves in a predetermined frequency band and reads data of an RFID tag in accordance with reflected waves from the data supply source apparatus which represent the image data obtained from the photographing operation.

Takei discloses a system comprising a camera unit and a recording unit, wherein the camera unit sends the still or moving image data (column 13 lines 61 – column 14 lines 2) to the recording unit using the radio frequency and wireless communication (column 6 lines 7-36). The recording unit receives the image data from the camera unit and records the data into the image

memory (column 1 lines 14-19, column 8 lines 30-43, column 10 lines 40-67, and column 11 lines 12).

In the same art of communicating sensed data wirelessly from a sensed data source to a destination using radio waves, **Sorrells** teaches using RFID tag to send sensed data from RFID tag device to RF generator as known and particular type wireless communication that provides power management and communication flexibility advantages of RFID communication, the RFID tag device coupling to multiple sensors that sense, for example voltage, current, pressure, temperature etc., to transmit sensor data to RF generator by modulating the continuous wave RF carrier of the RF generator with its data word bitstream by loading or unloading the resonant tuned circuit or antenna of the RFID tag device in accordance with the binary values of that data word bitstream (column 2 lines 1-9, column 2 lines 19-27, column 4 lines 10-20, column 6 lines 52-55, and FIG. 7B) which is the definition of “backscatter” communication. In addition, the RF generator transmits the continuous wave RF and detects the series data bitstream of on/off pulses represent the information from the RFID tag device (column 2 lines 11-17, column 4 lines 20-26, column 6 lines 55-58, and FIG. 7B).

In view of the teachings by **Takei** and **Sorrells**, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to implement the wireless communication interface for wirelessly communicating/transferring captured image data in **Takei** with the known backscattering RFID communication interface that transfers sensor data such as taught by **Sorrells** that include *the wireless communication system wherein: the data supply apparatus is operable photograph a moving image or still image and to perform an RFID (Radio Frequency Identification) tag function that transmits image data obtained from a*

photographing operation by a back scattering scheme by absorbing or reflecting external radio waves provided by the data provided destination apparatus in accordance with a bit string of the data through an on/off control of an antenna switch to make an antenna in a terminated state or an open state; and the data provided destination apparatus is operable to perform a reader function that transmits the radio waves in a predetermined frequency band and reads data of an RFID tag in accordance with reflected waves from the data supply source apparatus which represent the image data obtained from the photographing operation to allow the RFID tag device to transmit its data when triggered by the RF generator, for the known advantages of RFID communication.

(2). As to **claim 2**, **Takei** and **Sorrells** disclose the limitations of **claim 1** except for the claimed limitations of *the wireless communication system in which:*

the data provided destination apparatus transmits a non-modulated carrier or a modulated control signal, and the data supply source apparatus transmits data by absorbing or reflecting the external radio waves on a basis of termination control of the antenna; and

the data provided destination apparatus receives the data on a basis of presence/absence of the reflected waves from the supply source apparatus.

In the same art of using RFID tag to transmit data from RFID tag device to RF generator, **Sorrells** discloses the wireless communication system wherein the RF generator transmit the continuous wave forward to the RFID tag device (column 6 lines 30-37 and FIG. 7B) and the RFID tag device transmit sensor data to RF generator by modulating the continuous wave RF carrier of the RF generator with its data word bitstream by loading or unloading the resonant tuned circuit or antenna of the RFID tag device in accordance with the binary values of that data

word bitstream (column 2 lines 1-9, column 2 lines 19-27, column 4 lines 10-20, column 6 lines 52-55, and FIG. 7B). The RF generator detects the series data bitstream of on/off pulses represent the information from the RFID tag device (column 2 lines 11-17, column 4 lines 20-26, column 6 lines 55-58, and FIG. 7B)

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include *the wireless communication system in which: the data provided destination apparatus transmits a non-modulated carrier or a modulated control signal, and the data supply source apparatus transmits data by absorbing or reflecting the external radio waves on a basis of termination control of the antenna; and the data provided destination apparatus receives the data on a basis of presence/absence of the reflected waves from the supply source apparatus*, as taught by **Sorrells**, in the wireless receiving apparatus of **Takei** for the purpose of providing a communication scheme between the RF generator and RFID tag device using the back scattering scheme to allow the RFID tag device to transmit its data when triggered by the RF generator.

(3). As to **claim 3**, **Takei** and **Sorrells** disclose the limitations of **claim 1**. Further, **Takei** discloses *the wireless communication system in which: the data provided destination apparatus has means for storing or reproducing data received from the data supply source apparatus* (column 10 line 58 – column 11 line 12 and FIG. 10 the image memory 1006 and the record reproduction 1010).

(4). As to **claim 11**, **Takei** and **Sorrells** discloses the limitations of **claim 1** except for the claimed limitations of *the wireless communication system in which the data supply source apparatus is a digital camera or a mobile phone*.

Takei discloses a system comprising a camera unit (FIG. 3 the image pickup device 300 and FIG. 4 the camera unit 302) and a recording unit, wherein the camera unit sends the still or moving image data (column 13 lines 61 – column 14 lines 2) to the recoding unit using the radio frequency and wireless communication (column 6 lines 7-36). The recoding unit receives the image data from the camera unit and records the data into the image memory (column 1 lines 14-19, column 8 lines 30-43, column 10 lines 40-67, and column 11 lines 12). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include *the wireless communication system in which the data supply source apparatus is a digital camera or a mobile phone*, as taught by **Takei**, in the wireless communication system for transferred image data of **Takei** and **Sorrells**, for the purpose of capturing the image data.

(5). As to **claim 12**, **Takei** and **Sorrells** discloses the limitations of **claim 1** except for the claimed limitations of *the wireless communication system in which the data provided destination apparatus is a personal computer, a television, or a printer*.

Takei discloses a system comprising a camera unit (FIG. 3 the image pickup device 300 and FIG. 4 the camera unit 302) and a recording unit (FIG. 9 the recording device 900 and FIG. 10/13 the recording unit 903), wherein the camera unit sends the still or moving image data (column 13 lines 61 – column 14 lines 2) to the recoding unit using the radio frequency and wireless communication (column 6 lines 7-36). The recoding unit receives the image data from the camera unit and records the data into the image memory (column 1 lines 14-19, column 8 lines 30-43, column 10 lines 40-67, and column 11 lines 12) and displays the image data on the monitor (column 13 lines 61 – column 14 lines 2 and FIG. 10/13 the monitor 1016). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed

invention to include *the wireless communication system in which the data provided destination apparatus is a personal computer, a television, or a printer*, as taught by **Takei**, in the wireless communication system for transferred image data of **Takei** and **Sorrells**, for the purpose of displaying the image data.

4. **Claim 4 is rejected under 35 USC 103(a) as being unpatentable over Takei in view of Sorrells and further in view of Maeda et al. (Maeda - US 6,408,095 B1) and Hohberger et al. (Hohberger - US 6,686,829 B1).**

As to **claim 4**, **Takei** and **Sorrells** disclose the limitations of **claim 1**. Further, **Takei** and **Sorrells** disclose *the wireless communication system in which: the data provided destination apparatus receives the data on a basis of presence/absence of the reflected waves from the supply source apparatus (Sorrells: column 2 lines 11-17, column 4 lines 20-26, column 6 lines 55-58, and FIG. 7B), performs error detection, and transmits an error detection result in a form of a control signal made of an ASK, PSK or FSK modulation wave (Takei: column 8 lines 10-19; signal modulation, column 10 lines 7-15; error detection function, FIG. 7, FIG. 10) except for the claimed limitations of the data supply source apparatus demodulates the control signal at a reception unit and demodulation unit to perform re-transmission control.*

Regarding *the data supply source apparatus demodulates the control signal at a reception unit*, in the same art of using wireless technology to transfer image data, **Maeda** discloses a system, apparatus and method for communication, display and output of images. In addition, Maeda discloses *the data supply source apparatus demodulates the control signal at a reception unit* (column 4 lines 54-59, column 10 lines 7-67, FIG. 8, and FIG. 9).

Regarding *demodulation unit to perform re-transmission control*, **Hohberger** discloses an electronic identification system with forward error correction system wherein the error detection used in conjunction with on-demand retransmission (ACK/NAK protocol), and the message is retransmitted until no error is detected (column 1 lines 51- column 2 line 3 and FIG. 1).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the wire communication system in which the data supply source demodulates the control signal at a reception unit and demodulation unit perform re-transmission control, as taught by **Maeda** and **Hohberger**, in the wire communication system for transferred image data of **Takei** and **Sorrells** for the purpose of satisfying image quality and transmission rate of image information with display performance of the display unit without any error in data received at the display device.

5. **Claim 5 is rejected under 35 USC 103(a) as being unpatentable over Takei in view of Sorrells and further in view of Maeda.**

As to **claim 5**, **Takei** and **Sorrells** disclose the limitations of **claim 1** except for the claimed limitations of *the wireless communication system in which: the data supply source apparatus having photographing means is remotely controlled by a command in a control signal transmitted from the data provided destination apparatus.*

In the same art of using wireless technology to transfer image data, **Maeda** discloses a system, apparatus and method for communication, display and output of images. In addition, **Maeda** discloses *the wireless communication system, in which: the data supply source apparatus having photographing means is remotely controlled by a command in a control signal* (column 6

lines 40-48) *transmitted from the data provided destination apparatus* (column 10 lines 7-67, FIG. 8, and FIG. 9).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include the wire communication system in which the data supply source having photographing is remotely controlled by a command in a control signal transmitted from the data provided destination apparatus, as taught by Maeda, in the wire communication system for transferred image data of **Takei** and **Sorrells** for the purpose of satisfying image quality and transmission rate of image information with display performance of the display unit.

6. **Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Takei in view of Sorrells and further in view of Zai et al. (Zai – US 6,122,329).**

As to **claim 13**, **Takei** and **Sorrells** discloses the limitations of **claim 1** except for the claimed limitations of *the wireless communication system in which the image data is transmitted by the data supply source apparatus at a frequency of approximately 2.4 GHz*.

In the same art of RFID communication, **Zai** discloses an RFID interrogator recovers the backscattering data signal from the RFID transponder wherein the RF carrier is around 2.4 GHz (abstract, column 6 lines 65-67, column 7 lines 1-3, lines 51-67, column 8 lines 1-10, column 9 lines 26-35, FIG. 1, and FIG. 2).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include *the wireless communication system in which the image data is transmitted by the data supply source apparatus at a frequency of approximately 2.4 GHz*, as taught by **Zai**, in the wire communication system for transferred image data of **Takei** and

Sorrells, for the purpose of transferring image data due to the fast transferring rate of 2.4 GHz frequency.

7. **Claim 14 is rejected under 35 USC 103(a) as being unpatentable over Takei in view of Sorrells and further in view of Wood, Jr. (Wood – US 7,315,522 B2).**

As to **claim 14**, **Takei** and **Sorrells** discloses the limitations of **claim 1** except for the claimed limitations of *the wireless communication system in which the data provided destination apparatus includes a circuit to provide confirmation to the data supply source apparatus whether the image data supplied from the data supply source apparatus is correct or incorrect.*

In the same art of RFID communication, **Wood** discloses a method wherein the RFID tag responds to the interrogation signal of the interrogator, when the interrogator receives the responsive signal from the RFID tag, the interrogator transmits an acknowledgement signal (ACK) back to the RFID tag, and when the interrogator does not receive the responsive signal from the RFID tag, the interrogator returns a negative acknowledgment (NAK) (column 10 lines 31-46 and FIG. 5).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the claimed invention to include *the wireless communication system in which the data provided destination apparatus includes a circuit to provide confirmation to the data supply source apparatus whether the image data supplied from the data supply source apparatus is correct or incorrect*, as taught by **Wood**, in the wire communication system for transferred image data of **Takei** and **Sorrells**, for the purpose of confirming the data received from the wireless communication system for transferred image data of **Takei** and **Sorrells** to allow the camera unit

to retransmit the responsive image data when the recording unit does not receive the responsive/error image data from the camera unit.

Citation of Pertinent Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

a. Oba et al., US 7,280,851 B2, discloses information processing apparatus and method and recording medium.

b. Suzuki et al., US 6,351,645 B1, discloses wireless selective calling receiver and external registering device therefore.

c. MacLellan et al, US 5,940,006, discloses enhanced uplink modulated backscatter system.

d. Squilla et al., USPG Pub 2004/0183918 A1, discloses producing enhanced photographic products from images captured at known picture sites.

e. Kusaka et al., USPG Pub 2008/0239083 A1, discloses electronic apparatus, electronic camera, electronic instrument, image display apparatus and image transmission system.

f. Nagata et al., US Patent 5,671,254, discloses modulation, demodulation and antenna coupling circuits used in IC card reading/writing apparatus, and method of supplying power to the IC card.

g. Takahashi, USPG Pub 2003/0036397 A1, discloses communication apparatus capable of connecting information processing apparatus.

h. Nihei et al., US Patent 7,304,682 B2, discloses image processing system, image capturing apparatus and system and method for detecting backlight status.

- i. Macda, US Patent 7,443,420 B2, discloses printing system including a printing apparatus for printing image data transmitted from an image pickup apparatus identified by an approved ID information.
- j. Conoval, US Patent 6,400,903 B1, discloses Remote camera replay controller method and apparatus.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUANG PHAM whose telephone number is (571)-270-3668. The examiner can normally be reached on Monday - Thursday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BENJAMIN LEE can be reached on (571)-272-2963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QUANG PHAM/
Examiner, Art Unit 2612

/BENJAMIN C. LEE/
Supervisory Patent Examiner, Art Unit 2612